BEYOND PLASTIC BERMUDA

Response to the Government of Bermuda On Regulating Single Use Plastics: January 2022

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Opening statement

Beyond Plastic Bermuda (BPB) applauds the Government's commitment to eliminate single-use plastics (SUPs) in Bermuda beginning in 2022. We are pleased that the Government shares the concerns of the community over the harmful effects of plastic to the environment, the climate, and our health.

Beyond Plastic Bermuda is a newly formed collaborative group of Bermuda's registered environmental charities comprised of Bermuda Environmental Sustainability Taskforce (BEST), Keep Bermuda Beautiful (KBB), Greenrock as well as other environmental advocates. BPB's primary goals are to support the Government's recently announced 2022 ban on SUPs, and to act as agents for change in the community by educating the public about the perils of plastic pollution.

Our four goals:

1) To educate the public about the environmental and human health impacts of SUPs.
2) To offer guidance regarding safe alternatives to SUP products.
3) To encourage and support the Government's legislation and policies to reduce and eliminate single use plastics where possible.
4) To encourage and support the public to reduce and or eliminate individual consumption of SUPs where possible.

Beyond Plastic Bermuda looks forward to working with the Government and the community to achieve these goals.

Signed,

Erich Hetzel, *Bermuda Environmental Sustainability Taskforce*
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Introduction

Single-use consumer products and packaging are being purchased at an ever-growing rate due to their convenience and affordability. Single-Use Plastics (SUPs) comprises a large amount of those products and packaging. In Bermuda, our waste production is driving a waste crisis on our beaches and roads, pest infestations and issues in domestic waste management. SUPs are also potentially a factor in the declining health of Bermuda's citizens. In humans, plastics have been shown to be linked with severe adverse health outcomes such as cancers, diabetes, birth defects, impaired immunity, endocrine disruption, developmental and reproductive effects. [1] [2] [3] According to the Bermuda Environmental Statistics Compendium, levels of nitrogen dioxide, sulphur dioxide and particulates generated from the incineration of household waste at Tynes Bay Waste-to-Energy Facility are increasing yearly and teetering on health-safety limits.[4] Reported diseases related to environmental conditions in Bermuda increased by 3.9 per cent from 2018 to 2019. Poor recycling is impacting the ageing Tynes Bay Waste-to-Energy Facility, with maintenance costs related to boiler leak repairs averaging $22,000 in 2018 and 2019 but soaring to $94,000 in 2020.[5] The final resort of dumping garbage back in a local landfill has recently begun. SUPs account for half of the plastic produced every year. Many of these products, such as plastic food wrappers and bags, have a use-lifespan of mere minutes to hours, yet they remain in the environment for hundreds of years.[6] Reducing the amount of SUPs used in Bermuda will decrease both our exposure to plastics and our waste problem.

Bermuda's escalating waste crisis stems from our dated approach to waste management and our society's entrenched consumption habits on both the commercial and consumer level. Although making an impact on a global scale may seem futile, there are tangible solutions in working towards a more sustainable future and improving how we consume and dispose of

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[1] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3299092/#:~:text=Exposure%20to%20harmful%20chemicals%20during,endocrine%20disruption%2C%20developmental%20and%20reproductive

[2] https://www.ciel.org/wp-content/uploads/2019/02/Plastic-and-Health-The-Hidden-Costs-of-a-Plastic-Planet-February-2019.pdf

[3] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3862078/

[4] https://www.royalgazette.com/environment/news/article/20210129/tynes-bay-incinerator-pollution-increases/

[5] https://www.royalgazette.com/politics/news/article/20211110/bermuda-in-desperate-need-of-replacement-incinerator/

[6] https://www.nationalgeographic.com/environment/article/plastic-pollution

wasteful materials. Other Caribbean jurisdictions have already taken significant steps in reducing SUP usage[7]. Combining innovative approaches to sustainable business and waste management, with fair legislation and policy, BPB aims to help foster a more circular, sustainable society.

Chapter 1: Innovation

Moving toward a zero-waste and re-use economy is at the forefront of BPB's mission to aid in phasing out SUPs. Recycling was originally proposed as the solution to the world's plastics litter problems. We now know that only 9% of the world's plastic has ever been recycled and recycling is not the solution[8]. The popular phrase 'reduce and reuse' rings clear now, especially regarding plastic. In the hierarchy of the circular economy (Rethink, Redesign, Reuse, Repair, Remanufacturing, Recycling, Recover) a change from material recycling to product reuse is considered positive as more value is retained. As defined by the Ellen MacArthur Foundation, a circular economy is based on three principles, driven by design to eliminate waste and pollution; circulate products at their highest value; and regenerate nature.[9] In this section, we propose various innovative ways in which Bermuda could re-orient its business models with innovative sustainability methods and policy.

1.1 Plastic Product Alternatives

Many bioplastic products exist on the market, labelled as 'biobased,' 'biodegradable', and/or 'compostable'. Bioplastics, according to the Society of the Plastics Industry (SPI) Bioplastics Council, are defined as a plastic that is biodegradable, has bio-based content, or both. This unclear terminology continues to cause confusion for stakeholders. This is because bioplastics are made from plant-based materials but may have similar properties as ordinary plastic. Further, most forms of biodegradable plastic are only compostable in an industrial facility where temperatures of up to 65 degrees Celsius (165 degrees Fahrenheit) are used. Thus, the elimination of plastic in Bermuda should extend to any bioplastics that may contain fossil fuel properties. Therefore, alternative products entering Bermuda must be certified

[7] REPORT ON THE STATUS OF STYROFOAM AND PLASTIC BAG BANS IN THE WIDER CARIBBEAN REGION, 2019 United Nations Environment Programme
http://gefcrew.org/carrcu/18IGM/4LBSCOP/Info-Docs/WG.39_INF.8-en.pdf
[8] https://www.unep.org/interactive/beat-plastic-pollution/
[9] https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview

'home compostable'. Compliance of the importation of strictly home compostable products must be regulated.

1.1.1 Compostable bioplastic: understanding labelling and getting it right

Home compostable products and materials are designed to break down and compost in a home compost environment, at ambient temperatures and with a natural microbial community. One of the newest and yet most common home compostable bioplastics is called PHA (polyhydroxyalkanoates) and is made from a canola-oil base. When combined with other home compostable components, PHA retains the technical characteristics of petroleum-based plastics, while able to compost at the end of its life.

The emphasis on home compostability clarifies the difference from industrially (commercially) compostable products, which can only biodegrade in an industrial composting facility. Bermuda does not have an industrial compost facility. Even in the US, there are much fewer composting facilities than there are landfills or recycling plants, with the country having a mere 185 full-time commercial composting facilities. A product that is industrially or commercially compostable is certified by *ASTM D6400*, *ASTM D6868*, *BPI*, *EN 13432* (European equivalent), and *TUV Industrial* (Austrian) Industrial logos. These products tend to have 'greenwashed' packaging[10] and should be avoided. Currently, ASTM does not provide a test standard for home compost, and BPI has not evolved to include home compostables in their certification schemes.

Home compostable tests follow various standards around the world, including the Australian standard called *AS 5810*. This standard requires disintegration in 6 months, and biodegradation and compost formation in a year. *NFT 51800* from France and *prEN 17427* follow a similar standard. TUV Austria, the leading bioplastics certification body, provides their *OK compost HOME* certification. Currently, there is no equivalent certification to OK compost HOME in the US, as BPI solely certifies for industrial compost. Therefore, when evaluating a compostable product choice, OK compost HOME is the best possible certification to look for.[11]

[10] Greenwashing means having the appearance of being environmentally friendly, while in fact not being so.
[11] https://www.urthpact.com/certified-compostable-products-what-to-look-for-and-what-it-means/

1.2 Reusable container schemes

Conscious consumers around the world are participating in reusable container schemes that substitute SUPs with sturdy, washable takeout boxes for takeout food wrapping and transport. Zero-waste schemes have been successful in partnering with restaurants in various cities, using subscription programmes through smartphone apps that facilitate ease and convenience for the customer. These schemes help build a local circular economy for reusable packaging, connecting sustainably-minded food vendors and conscious customers around a shared asset – reusable containers and cups. Reusable container schemes require dynamic partnership from many diverse stakeholders and can provide opportunities for circular economy market growth, business development, and/or casual labour programmes.

Recommendation:

A basic subscription-based reusable container scheme:

1) Members request a reusable box at any participating restaurant.
2) Check out the reusable boxes at restaurant website or using an online app
3) After eating, rinse and return those boxes to several convenient collection points across the island.
4) Washing the reusable containers can be subsidised or become an opportunity for casual labour schemes. Commercial-scale washing facilities are required, along with air drying to ensure longevity of containers. Sharing commercial facilities during off hours may make this more attractive.

Examples of businesses with reusable container schemes:

- GreenToGo (Durham, NC)[12]
- Go Box (Portland, OR)[13]
- Caulibox (London, UK)[14]
- Deliverzero (New York, NY)[15]

[12] https://durhamgreentogo.com
[13] https://goboxpdx.com
[14] https://www.wearecauli.com
[15] https://instore.deliverzero.com

- Dabbbawala or Tiffin system (India)[16] [17]
- Dabbadrop (London, UK)[18]
- Just Salad (USA)[19]

These programmes use durable, dishwasher-safe food and drink containers which are made from polypropylene and which does not contain BPA. Polypropylene is fairly heat resistant and considered a 'relatively safe' plastic material, especially compared to plastics that use BPA, which is toxic.[20] The Tiffin scheme, popular in India and in plastic-conscious Indian restaurants around the world, uses tiered steel containers to keep food hot and prevent plastic leaching into food.

Such a reusable scheme could also be utilised by supermarkets for meat and cheese sales.

1.3 Sustainable Waste Management

Bermuda's waste management system is outdated considering the great amount of trash Bermudians produce. While 2.24 kg of waste is generated per capita per day in the USA, and 1.94 in Canada, Bermuda leads with a reported 4.54 kg.[21] Beyond Plastic believes Bermuda should adopt a widespread 'sort at source' method. Moreover, this section emphasises the need for increased investment into the Waste Management sector, including trash truck modernisation, and the improvement of recycling and composting services necessary to meet Bermuda's waste production needs this century.

1.3.1 Improve recycling

Bermuda recycles only approximately 20% of its total recyclable trash (Tin, Aluminium and Glass). A plastic ban will greatly increase usage in cans and glass, therefore more investment into Bermuda's recycling programme is necessary to complement the elimination of SUPs. Our understanding is that the Material Recovery Facility can handle at least ten times[22] the

[16] https://www.theguardian.com/lifeandstyle/2014/aug/17/tiffin-the-history-of-indias-lunch-in-a-box-mumbai
[17] https://www.babaskitchen.com.au
[18] https://dabbadrop.co.uk
[19] https://www.justsalad.com
[20] https://www.healthline.com/health/is-polypropylene-safe#is-it-bpa-free
[21] Silpa Kaza et al., *What a Waste 2.0* (Washington, DC: World Bank Group, 2018), 66.
[22] Personal Communication Waste Management Section of the Bermuda Government Ministry of Public Works 2021

amount of waste it processes at present.[23] Moreover, improperly recycled metals and large plastic items cause costly damage to Tynes Bay Waste-to-Energy Facility. Many of us may think the responsibility for sorting waste belongs to the waste operators. The truth is the public's contribution in sorting waste from home is urgently needed and can be easily implemented, as it has been for example in countries such as Canada, The Netherlands and Germany. Waste sorting is important because it could increase how much waste is recycled later, thus, reducing waste that ends up in the landfills, the environment, and at the Tynes Bay Waste-to-Energy Facility.

Recommendation:

1. Make recycling of Glass, Aluminium and Cans Mandatory
   Mandatory recycling will benefit Bermuda by reducing the amount of waste going to the Tynes Bay Waste-to-Energy Facility and help remove unwanted items from that waste stream. That will benefit the longevity of the Tynes Bay Waste-to-Energy Facility; provide jobs; reduce the presence of hazardous materials in the ash; and increase revenues from recycled aluminium. Mandatory recycling will also assist in fostering a culture of zero waste Bermuda.

2. Increase recycling collection days:
   Currently, recycling is collected every other week. The current recycling schedule fuels apprehension in households over waste build-up, and therefore many recyclables end up in the trash. Increased collection days will facilitate proper disposal of recyclable waste by avoiding waste accumulation within households.

3. Promote a designated recycling bin programme:
   Blue trash bags contribute to the plastic problem. Consider designating a recycling bin for households to collect recyclables. Recyclable materials (bottles and cans) can be dumped loosely into curbside recycling bin and facilitate effective processing within the Material Recovery Facility.

4. Establish Household Waste Sorting Points:

[23] https://www.royalgazette.com/environment/news/article/20190606/ministers-tour-recycling-plant/

Permanent waste and recycling points in communal, roadside containers in key community locations will provide an opportunity for citizens to sort their waste at the source while not having to travel to Tynes Bay Waste-to-Energy Facility or waiting for recycling collection days. Household waste can be sorted by type and put into the correct designated containers. Traditional collection points produce unpleasant side-effects: taking up space, overburdening trash trucks and are often an eyesore, with unpleasant smells and vermin. Underground Systems have become a clean, barrier-free and cost-effective solution. These points can be placed in convenient locations throughout the island, for example: Penno's Wharf, Shelly Bay, Heron Bay, Bull's Head and selected Esso stations.

The Netherlands presents an excellent example of the success of waste disposal points where waste sorting is done at the source (fig.).

1.3.2 Improve composting

The capabilities of Marsh Folly Compositing Facility are currently under-utilised by Bermuda's Waste Management model. Marsh Folly could be utilised and extended to process Bermuda's compostable waste, including household food waste. Food waste has the effect of

lowering incineration temperatures, making incineration less efficient. Composting would therefore lead to more efficient incineration of the remaining waste and reduced greenhouse gas emissions. The absence of rotting waste in trash will also help alleviate Bermuda's current rat infestation problem. Cities such as Portland, San Francisco and Montreal which have instituted food waste composting programmes have achieved great results. The compost could in turn be sold to farmers and individuals and contribute to Bermuda's commitment to be a more circular economy.

Recommendations:

1. Provide households with a designated Brown Composting Bin for food waste.
2. Initiate compostable waste collection service.

For example:
Initiate a Compost Subscription Service pilot programme and provide composting bins to participating households to initiate the uptake of household composting. Designate compost collection days, create a volunteer or casual labour pickup group. Compostable waste would be brought to Marsh Folly to be turned into soil.

Chapter 2: Communication and Public Outreach

2.1 Educating the population

Across the world, increasing public awareness and understanding of the detrimental impact of human activity on the environment has fostered the development and visibility of policies targeting plastics as a sustainability effort. These efforts have been typically facilitated by education campaigns focused on the symbiotic relationship between human life and the planet and the intrinsic or non-market derived value of the ecosystems we inhabit. Bermuda's NGOs such as BUEI, Greenrock, BEST, KBB and the National Trust have spearheaded the responsibility to educate the public and our youth on increasingly pressing environmental issues through camps, consultations, forums, presentations, and social media. Recently, Beyond Plastic hosted webinars centred on the SUP ban, BEST produced a SUP ban position paper and BUEI held the island's first Youth Climate Summit. However, often the communication has been limited by an appeal to a like-minded stakeholder group, reducing the traction benefit from engaging other stakeholders and the subsequent alignment with

regulatory intent.[24] Thus, a focus on multi-channel education and communications strategies differentiated by stakeholder grouping is necessary.

Recommendations:

2.1.1 Stakeholder engagement

It is important that Government engage all stakeholders in the discussion regarding future SUP restrictions. Stakeholders would include but not be limited to, the retail industry, importers, consumers, Ministry of Finance and the Ministry of Health. Stakeholders should be continuously engaged in the process of not only the writing of the law, but also its implementation. Beyond Plastic applauds the Government's initial step in creating a public forum where stakeholders from all sectors voiced their opinion. The next step is to have targeted and transparent consultations with commercial stakeholders and environmental NGOs.

2.1.2 Support NGOs in developing educational school and community events

Bermuda's NGOs play a large role in educating the community on the environmental impacts of plastic and wider environmental issues. However, there remains a gap in cooperation between schools and NGOs, particularly in public schools. Channels could be established between public schools and education providers to permit NGOs to give environmental assemblies regularly during school terms.

We would recommend that Government facilitate environmental education in the schools through school assemblies and involvement with the BUEI Eco-Schools programme. Eco-Schools can monitor and recognise the actions taken at the school level, which include broader communication to the wider school community about what the students have learned.

2.1.3 Enhance school curricula

Review current curricula by the Ministry of Education and identify where environmental issues, particularly those relating to plastic, can be integrated. Emphasize zero-waste living

[24] https://link.springer.com/chapter/10.1007%2F978-3-319-67122-2_14

and the importance of nature-based solutions such as tree-planting, gardening, and composting.

2.1.4 Information campaign partnership with retailers

Develop a QR code that directs users to an information page on how to reduce, compost, recycle and dispose of waste. For example, these QR codes can be adhered to alternative products, on composting boxes and public waste sorting sites. Detailed information on recycling and composting in Bermuda is an easy and accessible way for anyone to learn more about how to properly dispose of recyclable waste

Chapter 3: Policy and Legislation

The Government's goal to enact legislation to prohibit the importation of specific SUPs in scheduled phases is a necessary requirement to ensuring SUP elimination. This section outlines policy instruments that can be implemented to support the phased ban of SUPs.

3.1 Bermuda National Waste Management Plan

An updated plan for the modernisation of waste management in Bermuda is complementary to policy targeting SUP, and can even work to envelop this policy into a wider comprehensive plan. A National Waste Management Plan should set out the policy for waste management in Bermuda and cover a period between the present and several years into the future, together under one national plan. Therefore, the Government should consider drafting a National Waste Management Plan defining the future of Bermuda's waste management sector.

Recommendation:

- Set a framework of future waste management in Bermuda and introduce the control of waste policies under a national perspective.
- Focus on the most cost-effective conditions possible with regards to recycling and continue the collection of waste statistics.
- Introduce a target to increase the recycling of household waste by more than 50%.

- Enhance Municipal Solid Waste management in the direction of material and organic recovery.[25]

Examples:

- Netherlands: Third National Waste Management Plan[26] (2017-2023)
- Australia: National Waste Policy Action Plan (2019)[27]
- Ireland: Waste Action Plan for a Circular Economy[28] (2020)

3.2 Extended Producer Responsibility/Extended Importer Responsibility

Consider using Extended Importer Responsibility (EIR) as a tool to encourage a move to plastic alternatives. This could be modelled on Extended Producer Responsibility (EPR) strategies, which use the 'Polluter Pays Principle' that deems producers and businesses to have the responsibility to finance the collection and environmentally sound waste management of their products at end of life. In relation to Bermuda, importers of plastic products might contribute to subsidising proper waste management and disposal of the polluting products they import and education campaigns designed to discourage SUP use. The transfer of the financial (and organisational) burden associated with the management of end-of-life products from public authorities to producers renders EPR consistent with the Polluter Pays principle (OECD, 2016).[29]

The economic problem with plastic was well documented in a Worldwide Fund for Nature (WWF) report in 2021[30]. This report estimated that the true cost of plastic over its lifetime was ten times its first cost. This gives plastic the appearance of being inexpensive when it is not. EPR can be utilised to rebalance the economics of plastics.

[25] https://www.eea.europa.eu/publications/managing-municipal-solid-waste/netherlands-municipal-waste-management/view
https://slidetodoc.com/waste-management-in-the-netherlands-an-overview-of/
[26] https://rwsenvironment.eu/subjects/from-waste-resources/national-activities/national-waste/
[27] https://www.awe.gov.au/environment/protection/waste/publications/national-waste-policy-action-plan
[28] https://www.gov.ie/en/publication/4221c-waste-action-plan-for-a-circular-economy/

[29] https://www.ara.at/fileadmin/user_upload/Downloads/EU_Kreislaufwirtschaftspaket/Kunststoffbroschuere/OECD-EPR-Updated-guidance_report_final.pdf

[30] Plastics: The Costs to Society, The Environment and the Economy 2021 WWF – World Wide Fund For Nature (Formerly World Wildlife Fund), Gland, Switzerland
https://media.wwf.no/assets/attachments/Plastics-the-cost-to-society-the-environment-and-the-economy-WWF-report.pdf

In Bermuda, waste could be prevented at the source by those responsible for importing plastic and they could remain the owners of the plastic they sell and might bear responsibility for its collection after use. EPR is a policy approach adopted in Europe, the UK and Asia in which a producer's responsibility is extended to the post-consumer stage of a product's lifecycle (OECD, 2001; 2016). EPR holds producers/importers/businesses responsible for the collection and recycling of specified volumes of plastic that they produce and place into the market. In practice, EPR entails that producers 1) assume financial — and sometimes also organisational — responsibility for the collection, sorting and treatment of end-of life products. Deposit refund schemes are a form of EPR.

EPR systems have contributed to the development of efficient separate collection schemes for specific waste streams, including plastic packaging. Investment and operational costs for waste management of used packaging are now covered at least partly by industry, thus alleviating costs covered by the government for waste collection, sorting and recycling. For example, in Belgium, around €134 million and around €1 billion in Germany are generated annually from fees that come from an established system that address responsibility in the corporate sector.[31]

EPR is a widely used policy to support the transition to a circular economy in the European Union.[32] In the US, Maine became the first state to sign Extended Producer Responsibility (EPR) legislation into law for plastics and packaging materials on July 13, 2021, and Oregon passed a similar law on August 6, 2021[33]. This reflects a growing momentum towards adopting EPR legislation nationwide. Several of these state bills require producers to pay for a portion of the costs of recycling materials that they put into the market.[34]

EPR instruments: The most common EPR instruments are take-back requirements, advance disposal and recycling fees, and deposit-refund systems.

[31] https://plasticsmartcities.org/products/producer-responsibility-initiative
[32] https://www.pbl.nl/sites/default/files/downloads/pbl-cpb-2021-extended-producer-responsibility-design-functioning-effects-4511.pdf
[33] https://www.rila.org/blog/2021/04/extended-producer-responsibility-bills
[34] https://www.bdlaw.com/publications/maine-becomes-first-state-to-sign-extended-producer-responsibility-law-for-packaging-other-states-with-plastics-and-packaging-bills-may-follow-shortly/

1) Take-back requirements oblige producers to collect their products at the end of their life and to organise their appropriate treatment. This is usually pursued through specific quantitative collection and/or recycling targets.

2) Advance disposal or recycling fees: upfront payments required by consumers to cover the end-of life collection and treatment costs of a product.

3) Deposit-refund systems: consumers pay a deposit when purchasing a product and receive a refund (usually of the same value) upon its return to a drop-off point. This provides consumers a price incentive to properly sort and dispose of end-of-life products, and thus to reduce littering.

3.3 Customs CPC Code Amendments

Bermuda's Customs Procedure Codes (CPC) should be amended to provide separate categories for beverages imported in cans, glass bottles, paper-based cartons and plastic bottles. In this way we can gain baseline data and regulate beverages based on container type and monitor progress toward eliminating plastic bottles.

3.4 Update Health Policy

We have been informed by the Health Department that consumers are not allowed to bring their own containers into restaurants or markets. This extends even to a consumer supplying his own cup for coffee. This policy and/or law needs to be amended to encourage reuse of clean containers provided by consumers for their own use. Waitrose supermarket chain in the UK introduced a programme to encourage customers to bring their own containers[35]. Other markets are following suit[36]. Restaurants also should be allowed to support Bring Your Own Container schemes for takeaway[37] [38]. If this is permissible in the UK and other jurisdictions, then Bermuda's regulations might be similarly adapted.

[35] https://www.waitrose.com/ecom/content/about-us/sustainability/unpacked
[36] https://www.walesonline.co.uk/whats-on/shopping/supermarket-plastic-wales-campaign-pollution-16625223
[37] https://trashlesstakeaway.com.au/
[38] http://www.byosingapore.com/how-to-byo/

3.5 Environmental Trust Fund

BPB would recommend the creation of an Environmental Trust Fund[39] which would be used to fund continuing environmental education in Bermuda. These have proven to be useful in many jurisdictions as vehicles for funding various environmental endeavours.[40] A Bermuda environmental trust fund might be funded through taxes aimed at reducing SUPs or other contributions. NGOs or other educational organisations could apply for grants to the Trust for funding of environmental educational programmes. An already established foundation such as the Centennial Foundation could administer the Trust.

Chapter 4: Comments made by importers and/or commercial users of SUPs

The following is feedback and some common concerns we heard in our discussions with commercial stakeholders. These are not direct quotes, but are paraphrased. These also should not be interpreted as the stakeholders overall impression of the Government's Discussion Paper. Opinions both positive and negative vary greatly amongst individuals.

Now is not a good time to further burden business or consumers

It was stated that given that Bermuda is only just now recovering from the economic impacts of the Covid pandemic, it would be better to delay any new restrictions on imports of SUPs. The BPB position on this comment is that a delay is not warranted. To an extent, it is likely there will always be reasons to delay changes. Change is by its nature disruptive. However, given the increasing rate of plastic use, failing to act now will only exacerbate the problem in the future. If restrictions are phased in over time, hopefully the changes will not prove disruptive and will occur as the effects of the Covid crisis wane.

Bermuda has to wait for other nations to make the required changes. We cannot force the change in products because we have so little market power or influence

We see this as a request for an unrequired delay. Small jurisdictions are possibly the best place to effect change on large issues such as these. Large jurisdictions are often conflicted by political and economic interests and can find it difficult to reach a consensus to remove

[39] http://wiomsa.org/mpatoolkit/Themesheets/E4_Environmental_trust_funds.pdf
[40] https://www.undp.org/content/dam/sdfinance/doc/Environmental%20Trust%20Funds%20_%20UNDP.pdf

hazardous substances. Small jurisdictions however, can begin to influence the larger change that is required. For example, this was one of the ways in which tobacco restrictions began to be successfully enacted[41]. There is also the question of health. By removing products from the market that are negatively impacting health, we can effect meaningful change in Bermuda, without waiting for the world to act.

Banning Single-Use Plastics will be inflationary

As referenced elsewhere, plastics are priced at an artificially low cost that does not take into account their full lifecycle costs (by a factor of ten). For this reason, in some cases alternatives may appear to have a higher cost. We heard this most often from commercial users who purchase SUPs in case lots or even by the shipping container. In those cases, it could be true that they may experience significant increases in costs when purchasing alternatives. However, those same increases when extended to the end user cost are often a small percentage of the cost of the actual end user product.

Banning Plastics will force business to reduce employment and may force some businesses to close

This was always stated without supporting data. This claim has to be evaluated on a sector-by-sector basis and even business-by-business case. For example, if all hot food containers were eliminated in the first instance of restrictions, then certainly restaurants (and supermarkets) that do a significant portion of their business from takeaway hot food would be negatively impacted. Another example would be if a small, local fruit juice bottler who today uses only plastic bottles. If these at-risk businesses and/or sectors are given time to adjust however it is hoped that impacts could be mitigated. There might be opportunities for cooperative buying to reduce the impact of increased costs which reduce cost impacts on small businesses. Examples are discussed more extensively later in this document.

Reducing plastic usage should be consumer driven, not done by law

In a perfect world we would agree. However, the consumer education required to move the local market away from SUPs will likely require large sums of money and could take many years to achieve. In the intervening time Bermudians and our environment will continue to be negatively impacted by SUPs and their uses grow. Part of the role of good Government is to

[41] https://slate.com/news-and-politics/2021/01/fight-big-tobacco-lessons-big-oil.html

protect its citizens and this is a case where the complex issues surrounding SUPs require immediate Government action.

Plastic doesn't litter, people do. We should encourage and/or educate people to stop littering

Our first issue with this is that the problems surrounding SUPs are many and not simply related to litter. Litter is a serious local issue, but an even more important issue is human health. Continuing to allow people to be exposed to SUPs will negatively impact Bermudian's health. In addition, incineration of plastic which is the end of life for managed plastic waste in Bermuda, is not without human and environmental health consequences. Specific to litter however, even if we could increase funding for education regarding the negative impacts of litter, we are unlikely to eliminate litter completely from Bermuda.

It should be noted that it was a rare individual who did not preface any concerns of pending restrictions with an acknowledgement of an awareness of the growing plastic crisis. Some want to 'wish away' the problem or hope that we in Bermuda do not have to act on it. Unfortunately, Bermuda must act on this issue both independently and in concert with other nations to effect change.

Chapter 5: Target Plastics

The Government's Discussion Paper on SUPs gave an extensive list of items that were being considered for import restrictions. Following consultation with importers, BPB would like to provide the following recommendations.

In all our recommendations we would recommend a blanket allowance for import and use in medical settings such as the hospital and nursing homes.

Plastic straws

Ban immediately

BPB can see no reason to permit plastic straws of any size to be imported, except for use in a medical setting. Alternative products are available, including newly introduced Phade PHA home and marine compostable straws.

Plastic utensils (These include spoons, forks and knives, and stirrers)

Ban immediately

BPB can see no reason to permit plastic utensils designed for single use to be imported except for use in a medical setting. Reusable utensil kits are widely available and wooden single use alternatives exist.

Plastic bags

The import and sale of plastic bags designed for retail and supermarket use should be restricted immediately.

Careful consideration needs to be given to the definition and scope included. In some jurisdictions bags have been eliminated based on size and/or weight or thickness.[42] This has led some retailers to exploit technical specifications in order to continue to use plastic bags made of heavier plastic (>4mil). This could actually make the problem worse[43].

If possible, we would suggest that use by application be restricted. We would suggest that all retail, restaurant and supermarket check-out use of single-use LLDPE, LDPE, HDPE plastic bags be immediately discontinued regardless of weight and size. In order to encourage overall waste reduction, we would suggest that replacement paper bags have a significant fee associated them to discourage use of alternative single-use bags.

It is acknowledged that all single-use and even multi-use bags present environmental issues. In addition, any single-use product contributes to our large waste stream. For this reason, part of the goal of new legislation should be to encourage multi-use whenever possible. Studies have looked at how many uses each type of bag needs to be used to reach some defined environmental score[44]. For this reason, we recommend that at this time, woven and non-woven polypropylene bags of suitable specifications to facilitate long term reuse be permitted as alternatives, so long as a significant fee is

[42] https://www.pressherald.com/2019/05/30/maine-house-approves-bill-to-ban-single-use-plastic-shopping-bags/

[43] https://www.eatthis.com/news-walmart-using-thicker-plastic-bags/

[44] Kimmel, Sc.D., Robert M., "Life Cycle Assessment of Grocery Bags in Common Use in the United States" (2014). Environmental Studies. 6.
https://tigerprints.clemson.edu/cgi/viewcontent.cgi?article=1006&context=cudp_environment/

charged when provided to ensure that consumers are incentivised to reuse those bags. These bags have been shown to have a low environmental footprint compared to alternatives[45].

We note that there are possibly numerous cases where exceptions should be made by application. For example

Plastic bags for meat: At this time there may be no alternative to supermarkets using plastic bags for meat products. Any exception should be reviewed on an annual basis however.

Ice bags: We know of no substitute for these at the moment due to the weight requirements. This should be reviewed annually.

Dry-cleaning bags: While there are alternative dry-cleaning bags available[46], we have been told they are machine specific and not designed for the equipment in use in Bermuda. Until compostable bags are available for the equipment in use in Bermuda, we would suggest that these be allowed.

Plastic trays: fruit, meat and vegetable trays

- **Fruit trays** packaged in Bermuda should be discontinued immediately.
- **Vegetable trays** should be discontinued immediately.
- **Meat Trays**: If meat trays are going to be used, they present a potential challenge. The best alternative in our opinion is to encourage a return to meat on demand from the butcher counter and eliminate pre-packaged meat, unless it is imported in that form (such as chicken). This is possibly one of the reasons why Europe produces significantly less plastic waste than Bermuda. Grocers have argued that it would be too expensive to provide and wrap meat at the butcher counter. Clearly this would add an expense, but we should quantify this potential financial impact. With pre-packaged

[45] Ahamed, A et al. Life cycle assessment of plastic grocery bags and their alternatives in cities with confined waste management structure: A Singapore case study, 2021 Journal of Cleaner Production Vol 278 https://www.sciencedirect.com/science/article/abs/pii/S0959652620340014

[46] https://www.ecogarmentbags.com/

meat, the concern is that that blood and meat juices soak into fibre-based trays and render them unsuitable very quickly. We believe that there may be possible alternatives such as Huhtamaki Fresh[47] and possibly Areca Palm Leaf Trays[48]. A reusable container scheme would also be very feasible at the butcher counters. Reusables would require a place for a dishwasher and drying.

Our recommendation at this time is that polystyrene food trays be eliminated immediately, but that Polyethylene terephthalate (PET) and polypropylene (PP) trays be permitted for a period of time while alternative single-use products or alternative methods are identified. We also recommend that consumer supplied containers be permitted at the butcher counter.

Plastic single-serving food sachets

We believe these should be banned immediately

Products containing microplastics

Industrial abrasives used in sandblasting, household abrasives that contains micro-beads and facial scrubs and other cosmetics that contains micro-beads. Where identified, these products should be eliminated immediately if there is no basis for their retention in the market.

Plastic-lined paper cups and food containers

- **Plastic lined COLD paper cups**: Plastic lined paper cups (including PLA lined) designed for cold beverages should be eliminated within one year to give companies time to source alternatives. Wax-lined cups exist as substitutes.

- **Plastic lined HOT paper cups**: Alternatives for paper cups lined with plastic (including PLA) cups for soup and hot beverages should be eliminated in one year. Alternatives for hot cups exist on the market[49] [50] [51], but may have limited availability. The "Butterfly Cup" may be a possible alternative, as this cup's design has an integral lid, eliminating the need for a plastic lid. The coffee bars in Bermuda expressed

[47] https://www.huhtamaki.com/fresh
[48] https://aplasticplanet.com/materials/palm-leaf/
[49] https://kotkamills.com/products/isla/
[50] https://teaspoons.co/products/copy-of-100-recyclable-isla-bio-hot-cups-12-oz
[51] https://colombier.com/ecological-to-go-cups/

concern about consumer acceptance of the Butterfly Cup, but consumers are adaptable. Elimination of single-use cups should be the goal and toward that end, providers of hot beverages should be allowed by the Health Department to fill a customer's own cup or container for beverages and soup

- **Plastic-lined food containers**: Plastic (including PLA) lined food containers should be eliminated from the market. Most of these containers are used for cold foods which can be contained in a fibre product[52] [53] or in a folding box [54].

Plastic cups and food containers

- **Plastic Cups**: Plastic (including PLA) cups are used for cold beverages. Cups such as the red solo cup and others are significant contributors to our plastic problem. We recommend that all plastic cups should be eliminated from the Bermuda market within one year. Alternatives in the form of wax-lined or other linings for cold beverages exist on the market. Sellers of 'smoothies' and other frozen drinks have become especially fond of serving these beverages in clear plastic cups which permit the consumer to see the beverage. They have expressed concern about a negative consumer reaction if clear cups are eliminated. Often these cups also come with a domed lid. While it may be visually pleasing to the consumer, the beverage itself remains the same in an opaque wax-lined cup. We do not believe that continued use of plastic cups is warranted in Bermuda. As with other beverages, we would recommend that Government permit consumers to bring their own cups for beverages.

- **Plastic food containers (cold)**:

  We would recommend that plastic food containers for cold food be eliminated from the market in one year. These containers are used widely for sandwiches, sushi and other cold and usually drier items. As discussed above, good alternatives exist for cold food transport.

- **Plastic food containers (hot)**:

[52] https://www.ecoproducts.com/eco-products-announces-vanguardtm-a-new-line-of-sugarcane-compostable-plates-containers.html
[53] https://www.sabert.com/products/pulp-36-oz-rectangle-container
[54] https://www.westrock.com/products/folding-cartons/bio-plus-terra-ii

Alternatives to plastic food containers for hot foods are difficult to find. For example, those used at Indian takeaway and hot food buffets at some supermarkets. This is unfortunate as the black plastic commonly used by these establishments is a health concern[55] and is possibly one of the most-used SUPs. According to restaurants and supermarkets we spoke to, the existing fibre containers presently on the market do not hold up well to the wet hot and often acidic food that goes into the containers at temperatures up to 180 degrees F. After a short time, the containers begin to soak through.

At present the only solution for these establishments other than SUPs would be to move to a reusable scheme. The additional benefit of a reusable scheme is that it eliminates a large single use disposable source from Bermuda's waste stream. There are such schemes that are working in the US such as Green to Go in Durham North Carolina. Such schemes could be operated independently or by the restaurant themselves. Containers could be made of stainless steel or reusable polypropylene. The former is better from the health perspective, but the containers are more expensive. Products made from other materials are being investigated by BPB. A reusable scheme would also require some space allocation for collection, a commercial dishwasher and space allocation for drying. At Green to Go (which operates as a third party to multiple restaurants), containers are collected at restaurants and other locations and washed and dried after hours in a restaurant kitchen. Clean containers are then sent to the participating restaurants for that day's service needs. At present they are cleaning approximately 2000 containers per week.

At this time Beyond Plastic is continuing to investigate the various systems that exist to see if there is an existing model or some combination model that might work in Bermuda.

Given the volume of this business sector, we would recommend that action on this market segment be delayed until most of the other SUPs are tackled. It may be that suitable alternatives for hot foods may not exist and that a reusable system is the only

[55] Turner, A Black plastics: Linear and circular economies, hazardous additives and marine pollution, 2018 Environment International Vol 117
https://s3.documentcloud.org/documents/6140350/Turner-2018-Env-Int.pdf

way forward. We would recommend that incentives for reusables such as duty breaks and possibly other tax incentives be put in place.

Styrofoam products

These include food service containers (e.g. clamshell and hinge containers, bowls, plates, hot and cold beverage cups and egg cartons). We recommend that all these food containers, including Styrofoam ice chests, be eliminated from the market immediately. Polystyrene, Expanded Polystyrene (EPS) and Extruded Polystyrene (XPS) are considered amongst the worst plastic polluters[56] [57] [58]. This is due both to its chemical components, production issues and its physical properties.

Unfortunately, EPS is widely used by Bermuda's food service industry and supermarkets. Applications include vegetable trays, meat trays and takeaway containers. Recommendations for those applications are presented elsewhere in this document.

Plastic single-use beverage pods

Unfortunately, plastic beverage pods have grown in popularity in the past decade. In our opinion, this is one of the prime examples of the world being 'killed by convenience'. There are so many examples of ways to make coffee without pods, even as single servings, that we assume it unnecessary to enumerate them in this document. For those who wish to retain their pod-based machines, there are reusable pods or home compostable pods. Moving people away from these may take some time however and they form significant portions of some small businesses' revenue streams. It is unclear if any home compostable pod products exist at this time, so the only alternative may be reusable pods. Given this we would suggest that elimination of these products be given two to three years to allow businesses to move away from non-compostable pods.

[56] https://medium.com/age-of-awareness/why-styrofoam-expanded-polystyrene-should-be-banned-everywhere-in-the-world-4101552f5e2b
[57] https://saferchemicals.org/2014/05/26/styrene-and-styrofoam-101-2/
[58] https://cehn.org/our-work/eco-healthy-child-care/ehcc-faqs/faqs-styrofoam/

Plastic-stemmed cotton buds

These should be eliminated from the market immediately

Oxo-degradable plastic

Oxo-degradable[59] plastics should be eliminated from the market immediately. These plastics do not degrade, but only break down into microplastics more rapidly.

'Biodegradable' plastic

We would suggest that this term be redefined since some plastics such as Polyhydroxyalkanoates (PHA) will naturally biodegrade in the environment. This is opposed to polyactic acid (PLA) which does not biodegrade except in an industrial compost facility. We would recommend that this restriction be rephrased to only allow those products that are certified as *home compostable* by TUV[60] or another certification organisation.

Plastic water bottles and other plastic beverage bottles.

An exception is recommended for large five gallon and three gallon polycarbonate plastic water bottles that are returned and refilled (Deposit Refund)

Background

The plastic drink bottle is normally made of Polyethylene terephthalate (PET).This polymer, though invented in 1941, was only formed into bottles in 1973. Since that time the use of PET bottles for water and soft beverages has exploded to the point that one million plastic bottles are used every minute globally. PET bottles are not suitable for all beverages however. As a case in point, alcoholic beverages including beer and wine are not typically sold in PET bottles for a variety of reasons. If and when beer and wine can be delivered in plastic, our concerns with plastic bottles will potentially double.

The concerns with the PET bottle are the same as the general concerns with other SUPs. Those are, environmental concerns, environmental justice concerns, plastics

[59] https://www.european-bioplastics.org/eu-takes-action-against-oxo-degradable-plastics/
[60] https://www.tuv-at.be/green-marks/certifications/ok-compost-seedling/

impact on climate change and health concerns. To focus just on health, the plastic bottle is part of the larger issue that concerns the chemicals used to manufacture plastics, some of which are proven Endocrine Disrupting Chemicals (EDCs). Some chemicals that have been used in the manufacture of plastics are suspected carcinogens. That stated, however, the PET bottle if stored and treated properly (kept cool and not deformed), then the levels of the chemicals of concern may be within governmentally set acceptable limits. It would be fair to ask how the limits were set, but we will ignore that question for this discussion. It should be considered that it is likely that not all plastic bottles are stored under proper conditions or treated in a manner to reduce leaching of chemicals. The other issue is that the general public is exposed not just to PET bottles: the issue is that plastic bottles exist alongside plastic food trays, plastic cutlery, plastic wrap, plastic packaging, plastic that we have ingested, plastic that we breathe and numerous other sources. In addition, EDCs are also found in the food we consume (from pesticides and herbicides) and from contaminants in our home, such as PFAS. The effect of cumulative exposures to these chemicals can add up and have effects on an adult body, affect the development of children and affect foetal development. This is termed 'the cocktail effect'.

Feedback from a supplier

In the BPB meetings, one beverage importer stated that they were unable to make any suggestions regarding steps they could undertake to reduce plastic bottle use in Bermuda. That importer sees the plastic bottle issue as completely out of their control. The overarching opinion was that sales of PET bottles is driven by consumer demand and local importers are only responding to that demand. It was felt that only public education could change people's habits and desires, such as the case that occurred with sugary drinks.

It should be noted that the alcoholic beverage industry appears to represents 50 - 75% of the shelf space allocation in many local markets (liquor, beer and wines). It should also be noted that the alcoholic beverage industry relies almost completely on glass and aluminium cans for distribution. The shelf allocation is likely reflects the fact that the worldwide alcoholic beverage industry is larger than the soft drinks industry by almost a factor of two, but how that relates to unit sales we do not know. The point is that this larger industry relies on a delivery vehicle that is heavily reliant on glass and

aluminium. This is due to the chemical and technical limitations of plastic. If the alcoholic beverage industry could source a plastic bottle which met the technical requirements, the world and by extension Bermuda, would (or will) face an even larger problem than we do today. This is obviously not a Bermuda issue but, is stated as an example of an industry that can exist, even in Bermuda, relying heavily on glass and aluminium.

Recommendation: Bermuda's Customs Procedure Codes (CPC) should be amended to separate beverages imported in cans, glass bottles, paper-based cartons and plastic bottles. In this way we can gain baseline data and regulate beverages based on container type.

Roughly 481.6 billion plastic water bottles are produced in the world annually[61]. This has no particular bearing on Bermuda however, other than we know we are a small part of the problem. We should determine how large Bermuda's contribution to the plastic bottle issue is in raw numbers and per capita.

We know that a certain percentage of waste in Bermuda ends up as litter, as we can see it on our roadsides. An unknown percentage of that litter then finds its way to local waters. Once in the water that ocean litter either becomes local coastline litter, part of the Atlantic Ocean gyre litter or eventually, coastal litter in another jurisdiction. How much is entering the local environment is difficult to quantify. Those opposed to Bermuda taking action to reduce plastic imports argue that given that we do not know how large our contribution to ocean plastic is, taking action against plastic imports is premature. They suggest that we should study and document to determine if we are contributing enough plastic to the local and global problem to warrant action.

In fact, we do have some statistics about how much trash gets picked up by KBB on land and from our shoreline. While we applaud data driven decision making, we feel that in this case it is a spurious line of criticism. Survey data and by the fact that KBB

[61] https://graphics.reuters.com/ENVIRONMENT-PLASTIC/0100B275155/index.html

is able to organise people (1847 people over three years 2016 - 2018[62]) to collect litter, indicate that Bermudians believe that litter is an issue. If the importers would like more local data, then studies could be done. However, we would argue that those studies should be funded by the importers. Conducting more in-depth analysis in Bermuda is not our recommendation however, due to the funding requirements. Whether Bermuda is better or worse with regards to waste leakage than the global averages is immaterial. People in Bermuda appear to agree that we have a litter problem. We also know from KBB trash studies that among the greatest contributors to litter are plastic bottle caps and plastic bottles. So, while certain importers may be satisfied that the majority of our trash finds its way to the Tynes Bay Waste-to-Energy Facility, it appears that many Bermudians do not think that is good enough.

Recommendation: Document the numbers of employees directly involved in the import of soft beverages.

There have been cases in the past where sales of certain products have been deemed to have a negative impact on the Bermudian community and therefore the sale of those products is restricted and/or sales are discouraged. In those cases, protecting the public outweighs the concerns of the purveyor. There are, however, other factors which may be taken into consideration, such as employment. It could be that concerns over employment mitigate concerns of product safety. In the present case, the argument is that the business of beverage importers will be negatively impacted and the importers will have to reduce employment. That argument has also been extended to the sales agents for those beverages. No data or basis for this claim has been made except that approximately 50% of the beverages sold come in PET.

While this argument may have some merit, consumer demand has some degree of flexibility. If plastic bottle brand X is not on the shelf, how willing will the consumer be to switch to glass bottle brand Y? We do not know the answer but, it is likely that it does not exist at the extremes of possible outcomes. Determining the maximum number of employees that might be affected by eliminating plastic bottles would be good data to have. Employment disruption at any time is not a good thing and on the back of a challenging pandemic is further cause for understanding the potential for impact in this employment sector.

[62] KBB - Summary-Bermuda - covering 2016, 2017, 2018

The above stated, in other cases, such as tobacco where public education and increasing taxes reduced the sales of tobacco over time, we can assume those sales reductions led to a reduction in the numbers of people employed to sell those items over time. Whether this was disruptive to the employees of the wholesalers or retailers in that case we do not know.

Reseller sales impacted by soft drink sales: In our discussions we heard opinions that at least in the 'grab and go' coolers located in smaller convenience stores and markets, that 'as long as it was cold, it was sold'. While we cannot state any conclusions based on data, we will be surprised if sales at the small retailers and takeaway restaurants will be greatly impacted by the removal of beverages in plastic bottles from 'grab and go' fridges. And as discussed above, even in the case of multipackage sales, there is likely some flexibility in consumer's decision making. There will be a decrease in variety but, we feel that with sufficient consumer education that residents will accept the changes. We hope to find volunteer restaurants that are willing to test this.
In the case of market variety it is likely true that consumers are used to purchasing certain brands, in certain sizes, and in certain containers. This is due to a variety of factors, but there could be consumer complaints if all their favourite products disappeared at once. Consumers will change and develop new habits, but there is only so much change that people can easily accommodate at one time.

Recommendations: Increase duty rates on beverages imported in plastic containers and reduce duty on beverages imported in glass, cans or cartons.
We would agree that an instantaneous ban on imports of plastic bottles could be disruptive, to consumers, business and employees. As with other public health issues, in order to steer demand gradually (but steadily) away from plastic bottles and toward alternatives gradually, we would recommend increasing the duty rate on plastic bottles and drinks imported in plastic bottles. Further we would recommend continuing to increase that rate over time based on predetermined import metrics. For example, if after 'X' years the percentage of plastic bottles remained at 50% of soft beverage imports, then the duty rate would increase. If after a further 'X' years the

import target of 60% of soft beverages was not met, then there would be a further duty increase. That could continue until a desired target was achieved.

Note that there are some small bottlers of beverages in Bermuda. We would want to encourage them to shift their containers to alternatives over time.
This approach would have the benefit that it would not be viewed as an outright ban. People are accustomed to the increased duty rate approach with products that are considered harmful. It would lead to a gradual reduction over a defined time to give importers and consumers time to adjust. This would allow the smaller importers and local beverage bottlers time to move to alternative products or containers.

The duty increase on plastic bottles would help balance the differential between products supplied in plastic versus alternatives. As has been documented the price of plastic is artificially low[63], so this approach helps address that imbalance.
Variety would remain unchanged initially and if importers were unable to source replacement beverages in alternative packaging, reductions would be gradual and give residents the opportunity to adjust.

Recommendation: Use Funds Generated Through Tariff increases to fund a vigorous consumer education campaign.
We would encourage Government to use any increased revenue stemming from duty increases to fund a robust consumer education programme or an Environmental Trust. As with any public health issue, consumer education will be key to acceptance and success of the programme. This education should include all the issues relating to plastic, encourage reuse rather than single use and include communication aimed at significantly increasing recycling.

Recommendation: Make changes in equipment and facilities necessary to facilitate increased rates of recycling.

[63] Plastics: The Costs to Society, The Environment and the Economy, 2021 World Wide Fund for Nature WWF https://europe.nxtbook.com/nxteu/wwfintl/tcops/index.php#/p/1

Economics of Collecting Trash: The fact that volunteers feel compelled to spend their free time collecting litter that was imported and sold by local companies is unfair to those volunteers and is economically unsound. Importers and retailers should be responsible for paying for the collection and impact of the litter which results from their imports and sales. Litter is produced by careless consumers, but those products are provided for by businesses that should bear some economic responsibility for the resulting waste. A follow-on argument is that poor consumer behaviour results from lack of consumer education. The argument continues that ‘we’ should invest in more education so that people stop littering. Education is a wonderful idea and we would agree that more is required. However, education comes at a cost and that cost is in fact part of the hidden or unrealised cost of the products which are imported and become litter. Those costs should be passed on to importers and become part of the cost of purchasing the products.

End

Appendix (A):

Recommended Implementation Phases from BEST's *Regulating SUPs in Bermuda: policy paper for public consultation*, August 2020:

1) Public information campaigns on SUPs be conducted as soon as practically possible in 2021, continuing through the proposed phases of legislative changes as outlined below.
2) Public consultations be held in 2021 to review the proposed bans and to prepare the discussions for further bans.
3) A SUPs procurement policy be implemented for all departments of the Bermuda ahead of legislative bans and ahead of legislative bans.
4) Legislation to prohibit the importation of specific SUPs be enacted by early 2022: Phase One.
5) Legislation to **ensure that non-plastic alternative products (to plastic products subject to any ban) are fully biodegradable be enacted by the first half of 2022.**
6) Legislation to prohibit the sale, distribution, and use of the banned SUPs be enacted by the end of 2022: Phase Two
7) Legislation be enacted to ban the release of helium-filled balloons outdoors.
8) Planned charges or fees on the use of SUPs to be scrapped in favour of the above bans.
9) Public consultations be re-commenced in 2022, or after one year from the first importation ban, to assess the effect of the bans and to consult on the next round of plastic items to be banned.
10) Public education campaigns on the dangers of SUPs be continued throughout 2022.
11) Legislation to prohibit the importation, sale, distribution, and use of further banned SUPs be enacted by the end of 2025: Phase Three